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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/771,947

02/04/2004

Hoe-Won Kim

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EXAMINER

LAM, DUNG LE

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

12/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/771,947	Applicant(s) KIM, HOE-WON	
	Examiner Dung Lam	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/5/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/8/07 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al** (US Pub. No. 2003/0005382) in view of **Tikalsky** (US Pub. No. 4,908,828) further in view of **Sebastian** (US Pub. No. 2002/0099838).

1. Regarding **claim 1**, **Chen** teaches a method for broadcasting data in a mobile communication system including a core network and a plurality of mobile stations (MSs) (102-104, Fig. 1 and wireless communication devices, WCD, para. 18), comprising the steps of: broadcasting, by the core network, transmission data over one shared downlink channel to the MSs within one base transceiver station (BTS) service area (para. 18 and 19);

and generating, by the MSs, receiving report data indicating whether the data has successfully been received (the MSs/WCDs use ACKs or NAKs, also known as acknowledgement messages to indicate the received or lost packets and to request retransmissions, [0020-0022, 0026-0028]), and transmitting the receiving report data to the core network at uniquely assigned uplink channel positions (acknowledgement messages are sent back to the network from WCDs via reverse channel, [0023]); and transmitting retransmission data blocks from the core network to the MSs following reception of the report data from the MSs ([0029-0030])

However, Chen does not specifically teach and the splitting of the data packet and a skip determiner that determines whether or not the retransmission data block should be received or skipped. In an analogous art, **Tikalsky** also teaches the splitting of a message to smaller size called packets comprising a header and a portion of the message and retransmission packet (C2 L37, L43-64, C4 L49-53, L59-64). It is known in the art of data transmission for the network to split a large data block into smaller packets/data blocks to send through the network to reduce packet loss. Therefore, it would have been obvious for one of ordinary skill in the art to combine Chen's method of using ARQ in broadcasting data to include Tikalsky's teaching of the known technique of splitting data into smaller data blocks for faster retransmission and minimize packet loss. **Tikalsky** further teaches that the receiving end uses the header to check and accepts only the retransmitting packets that have previously not been received and the transmission data is made by allocating the retransmission data block at a location where the retransmission data block of the transmission data block will be included (Abstract, C1 Ln 47-62, C2 Ln 43- 64, C3 L34-55, C4 Ln 49-66, C5 L27-60). Therefore, it would have been obvious for one skill in the art

at the time of the invention to combine Chen's teaching with **Tikalsky's** teaching of skipping the reception of a duplicated packet based on the analysis of the header in order avoid receiving duplicate packets unnecessarily and thereby minimize resource consumption.

However, **Chen** and **Tikalsky** do not specifically teach that the transmission data is made by allocating the retransmission data block at a particular location in the transmission data. In an analogous art, **Sebastian** teaches the transmission data which comprises the retransmitted packet ("3") first and then the new packets follow (packets "5","6","7" Fig. 2, see also [0010-0012]) which broadly reads on the limitation "the retransmission data block at a particular location in the transmission data". The cited paragraphs also read on the limitation of "the splitting of data into packets of retransmission and transmission data block". Therefore, it would have been obvious for one skill in the art at the time of the invention to combine **Chen and Tikalsky's** teaching of ARQ in data transmission with **Sebastian's** teaching of placing the retransmitted packet before the new packets to provide a more orderly sequence of packets to be received which makes it easier and faster to process.

2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al** (US Pub. No. 2003/0005382) in view of **Tikalsky** (US Pub. No. 4,908,828) in view of **Sebastian** (US Pub. No.2002/0099838) further in view of **Torsener** (US Publication No. 2005/0039101).

3. Regarding claim 5, **Chen, Tikalsky and Sebastian** teach a method of claim 1. However, they fail to teach that the MSs waits for a transmission request from the core network in order to uplink the receiving report data indicating whether the transmission data has successfully been received. In analogous art, **Torsener** teaches that Node B

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may request the UE to report a status (para.80). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to modify Chen's teaching of broadcasting data to have **Torsener's** teaching of requesting the UE to send a report status since this modification would prevent Node B from being overwhelmed/overloaded with numerous reports when the network is too congested.

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

3g TS 25.322 v3.1.2 (2000-1) discloses a RLC protocol that teaches includes the teaching of splitting data into smaller segments (section 4.2.1.1, 4.2.1.3, p. 15), and duplicate detection (p. 15) and receiving a request from the network to send the reports/ACKs p.35).

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Response to Arguments

Applicant's arguments with respect to claims 1 and 5 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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